

April 27, 2017

Arborist's Response to Correction Item #2 from March 7, 2017 Correction Letter #2: Project # 3025026, 3914 South Brandon Street, Seattle

This letter is in response to Correction Letter #2, Item 2. The basis for my opinion is from

- A on-site visual tree assessment performed September 9, 2015, and
- Communication about, and review of, A1.0 (Site Plan), A1.2 (Arborist Report & Tree Protection Plan), A1.3 (Excavation Plan & Tree Disturbance Diagrams), and LI (Landscape Plan).

All exceptional trees affecting this design are located on properties to the east and west of the subject property. The drip line radii of the exceptional trees most affected by this project (Trees #4, 5 and 6) range from 30 feet to 40 feet in width. This is huge! Impacts will occur within the drip line of these trees, but preservation is certainly possible.

The new driveway grade will be high enough to need no soil excavation within the inner drip line of tree #4, the black cottonwood. Its drip line radius was measured to be 30 feet. Given that disturbance should affect less than 30 percent of this tree's outer drip line radius, I believe that this tree will survive construction impacts well.

Low branches interfering with construction will need to be pruned back to allow access. This should not affect the trees' health because less than 20 percent of the canopy will be removed. All pruning must be done by a certified arborist or under the supervision of a certified arborist.

Application of 4 to 6 inches of wood chip mulch under the exceptional trees inside the tree protection fencing is recommended but not required. What is required is application of 6 inches of wood chip mulch with 5/8 inch plywood/OSB outside the fencing but between the fencing and building excavation. This will allow access around the building for construction but reduce root damage from compaction.

Soil amendments and new landscape plants on the west side of the new structure should enhance existing tree root growth as soil quality, watering, and maintenance will increase after construction is over. I suggest that landscape work, including soil amending, be done carefully by hand under the drip lines in order to preserve as many feeder roots as possible on these trees.

I have reviewed the relocation of the garage foundation. I approve the current design of tree protection fencing, building location, garage design, driveway, and landscaping in this

project. I believe that these trees will survive construction impacts as long as Required Tree Protection Measures are followed and strictly enforced. See below for required changes.

Required Changes to Site (A1.0) and Tree Protection (A1.2) Plans

1. Tree protection requirements seem to be scattered between A1.0, A1.2, and A1.3. I prefer that all tree protection requirements be placed on the Tree Protection Plan. These can also be shown on the Site Plan if the City requires it. They should be placed together in the plan set for easy reference by the contractor.
2. A tree fence design detail needs to be placed on the Tree Protection Plan. The fence should be chain link on pier blocks, at least 5 feet in height.
3. The Tree Protection Guidelines found on the Site Plan should also be placed on the Tree Protection Plan and the title changed to "Required Tree Protection Measures". They have been updated and are shown below.
4. #1 under the Tree Protection Measures list should be changed to reflect the new fence detail's correct plan title and number.

Required Tree Protection Measures

Tree protection measures for exceptional trees were written by this arborist, are revised for this letter, and are found below. They should be placed on the Tree Protection Plan (A1.2) in addition to the Site Plan (A1.0). If followed and enforced, they should allow the trees to survive construction. Finally, it is very important that the root zones of the exceptional trees be watered regularly over the construction period during dry months of summer.

Required Tree Protection Measures

Prior to development activity, land clearing, filling or any land alteration, vegetated areas and individual trees to be preserved shall be protected from potentially damaging activities in a Temporary Tree Protection Zone (TPZ) pursuant to the following standards and recommendations:

1. Tree Protection Fencing shall be installed prior to ground disturbance at the drip line radius for all trees to be preserved. See detail on A 1.1 and CSC.
2. Arborist Wood Chip Mulch shall be installed prior to ground disturbance between the tree protection fence and the building foundation to a depth of 6-inches and covered by 5/8" or thicker plywood/OSB.
3. Protective measures must be kept in place for the duration of construction.
4. "Keep out" signs shall be posted on all sides of the TPZ fencing.
5. Assess crew and contractor penalties, if necessary, to keep the TPZ's intact.
6. Check the integrity of TPZ fences weekly, and repair or replace as needed.
7. No soil disturbance or activity allowed within fenced areas, such as but not limited to: material storage / stockpiling, parking, dumping or washing.

- Landscaping at the end of the project should be done by hand so as to disturb as few roots as possible.
8. Utility trenches shall be located outside of the Tree Protection Zone of trees to be retained. If roots over one inch in diameter outside the Tree Protection Zone are damaged during construction, make a clean straight cut to remove damaged portion of root. Leave roots larger than two inches in diameter intact and undamaged if possible.
 9. All herbicides used around and under paving shall be labeled as safe for use near trees.
 10. Understory trees and shrubs shall be retained within Tree Protection Area except if invasive species. These plants contribute to the root health of the retained trees. If you wish to clear out debris, place equipment outside the drip line and reach in to scrape the surface.
 11. Roots encountered outside the Tree Protection Area during excavation shall be severed cleanly with lopper or saw. During the time of root exposure, keep roots moist with moist soil, wet mulch, or wet burlap. Roots may be uncovered with a low pressure water flow or air spade if needed.
 12. Injuries occurring to any tree to be preserved shall be immediately evaluated by a Certified Arborist.
 13. Pruning needed for clearance during construction shall be performed by a Certified Arborist or under the direction of a Certified Arborist.
 14. Weekly during the dry months apply water to a moist depth of 24 inches under the drip line radii of trees whose canopies overhang this property.

Assumptions and Limiting Conditions:

1. Field examination of the site was made on September 9, 2015. Subsequent reviews of the project design have occurred periodically throughout 2016 and 2017.
2. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consulting arborist can neither guarantee nor be responsible for the accuracy of information and/or drawings provided by others.
3. All trees possess the risk of failure. Trees can fail at any time, with or without obvious defects, and with or without applied stress. Trees are living biological organisms, and it is impossible to predict or guarantee their stability or failure in the future.

Submitted by:



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